

Claims:

- 1.) A cell of mammals which is loaded with bacteria for the prophylaxis or therapy of a disorder,
5 where the cell is autologous, allogeneic or xenogeneic and is selected from the group consisting of "macrophages, dendritic cells, granulocytes, lymphocytes, tumor cells and tissue cells".
10
- 2.) The cell as claimed in claim 1, which is inactivated by irradiation or other methods.
- 3.) The cell as claimed in claim 1 or 2, where the
15 bacteria are alive, nonvirulent, virulence-attenuated or dead.
- 4.) The cell as claimed in any of claims 1 to 3, where the bacteria are selected from the group
20 consisting of "Mycobacterium tuberculosis, M. bovis, M. bovis strain BCG, BCG substrains, M. avium, M. intracellulare, M. africanum, M. kansasii, M. marinum, M. ulcerans, M. avium subspecies paratuberculosis, Nocardia asteroides,
25 other Nocardia species, Legionella pneumophila, other Legionella species, Salmonella typhi, S. typhimurium, other Salmonella species, Shigella species, Yersinia pestis, Pasteurella haemolytica, Pasteurella multocida, other Pasteurella species,
30 Actinobacillus pleuropneumoniae, Listeria monocytogenes, L. ivanovii, Brucella abortus, other Brucella species, Chlamydia pneumoniae, Chlamydia trachomatis, Chlamydia psittaci and Coxiella burnetii".
35
- 5.) The cell as claimed in any of claims 1 to 4, where the bacteria harbor recombinant DNA, the DNA coding for at least one active substance.

- 6.) The cell as claimed in any of claims 1 to 5, where at least one active substance is produced by the bacteria themselves with the aid of suitable promoters, or expression thereof is under the control of a eukaryotic promoter.
- 7.) The cell as claimed in any of claims 1 to 6, where intracellular, membrane-associated or secretory production takes place.
- 8.) The cell as claimed in any of claims 1 to 7, in which the active substance is selected from the group consisting of "antigens of infectious agents such as viruses, bacteria, mycoplasmas, parasites, antigens specific for tumors, in particular proteins encoded by oncogenes, antibodies, epitope-binding fragments of antibodies and fusion proteins comprising at least one epitope-binding fragment of an antibody directed for example against an antigen on a tumor cell, on a lymphocyte such as, for example, a T lymphocyte or on an endothelial cell such as, for example, a tumor endothelial cell, enzymes, in particular enzymes for activating inactive precursors of a medicament such as, for example, a β -glucuronidase, a phosphatase, a hydrolase, a lipase, immunosuppressant cytokines such as, for example, IL-10, immunostimulating cytokines such as, for example, IL-1, IL-2, IL-3 or IL-6, chemokines, interferons, growth factors such as, for example, G-CSF, GM-CSF, M-CSF, FGF; VEGF or EGF, or inhibitory proteins for cytokines, chemokines, interferons or growth factors".
- 9.) The use of a cell as claimed in any of claims 1 to 8 for the prophylaxis or therapy of a disorder, where the active substance blocks negative regulatory elements in the tumor tissue.

- 10.) The use of a cell as claimed in any of claims 1 to 8 for the prophylaxis or therapy of a disorder, where the bacteria serve as proinflammatory stimulant in tumor tissue.
- 5
- 11.) The use of a cell as claimed in any of claims 1 to 8 for the prophylaxis or therapy of a disorder, where dendritic cells or macrophages are employed simultaneously as carrier for a vaccine antigen.
- 10
- 12.) The use of a cell as claimed in any of claims 1 to 8 for the prophylaxis or therapy of a disorder, where the active substance and/or the vaccine antigen is loaded ex vivo onto the dendritic cells or onto the macrophages.
- 15
- 13.) The use as claimed in claim 12), where the vaccine antigen consists of defined peptides.
- 20
- 14.) The use as claimed in claim 10), where the cell is fused to another cell which expresses a tissue antigen or a tumor antigen.
- 25
- 15.) The use as claimed in claim 14, where the fused cells are autologous tumor cells.
- 30
- 16.) The use of the cells as claimed in any of claims 1) to 8 for the prophylaxis or therapy of a disorder.
- 35
- 17.) The use of a cell, in particular as claimed in any of claims 1 to 8, which is loaded with a microorganism comprising a foreign DNA, in particular bacterial microorganism, for producing a pharmaceutical composition.
- 18.) The use as claimed in claim 17, where the foreign DNA codes for a defined active substance, and where the pharmaceutical composition is intended

- 22 -

for the prophylaxis or treatment of a disorder which can be prevented and/or treated with the active substance.